Amendments to the Claims:

Please enter the following amendments and cancellations without prejudice or disclaimer. This listing of claims replaces all prior versions and listings of claims in the application. Amendments are shown relative to Applicants' Response mailed November 5, 2004.

Listing of Claims:

1.- 8. (Canceled)

9. (Currently amended) A BLyS binding polypeptide comprising an amino acid sequence of the following formula ~~according to one of the following formulae~~:

(H) Cys-X_5-Phe-X_7-Trp-Glu-Cys (residues 4-10 of SEQ ID NO:1),

wherein

X_5 is Phe, Trp, or Tyr; and

X_7 is Pro or Tyr; or

(I) Cys-X_2-X_3-X_4-X_5-X_6-X_7-Cys (SEQ ID NO:9),

wherein

X_2 is Asp, Ile, Leu, or Tyr;

X_3 is Arg, Asp, Glu, His, Ile, Leu, Lys, Phe, Pro, Tyr, or Val;

X_4 is His, Leu, Lys, or Phe;

X_5 is Leu, Pro, or Thr;

X_6 is Arg, Asn, Gly, His, Ile, Lys, Met, or Trp; and

X_7 is Ala, Asn, Gln, Glu, Gly, His, Ile, Leu, Met, Phe, Ser, Trp, Tyr, or Val; or

(J) Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-Cys (SEQ ID NO:10),

wherein

X_2 is Asn[[,]] or Asp~~, Pro, Ser, or Thr~~;

X_3 is Arg, Asp, Ile, Leu, Met, Pro, or Val;

X_4 is Ala, Ile, Leu, Pro, Thr, or Val;

X_5 is Asn, His, Ile, Leu, Lys, Phe, or Thr;

X_6 is Asn, Glu, Gly, His, Leu, Lys, Met, Pro, or Thr;

X_7 is Arg, Asn, Asp, Gln, Glu, Gly, Ile, Lys, Met, Pro, Ser, or Trp; and

X_8 is Arg, Glu, Gly, Lys, Phe, Ser, Trp, or Tyr; or

(K) Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-Cys (SEQ ID NO:11),

wherein

X_2 is Asp, Gln, His, Ile, Leu, Lys, Met, Phe, or Thr;

X_3 is His, Ile, Leu, Met, Phe, Pro, Trp, or Tyr;

X_4 is Asp, His, Leu, or Ser;

X_5 is Ala, Arg, Asp, Glu, Leu, Phe, Pro, or Thr;

X_6 is Ala, Arg, Asn, or Leu;

X_7 is Ile, Leu, Met, Pro, Ser, or Thr;

X_8 is Ala, Arg, Asn, Gly, His, Lys, Ser, or Tyr; and

X_9 is Ala, Arg, Asn, Gln, Leu, Met, Ser, Trp, Tyr, or Val; or

(L) Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys (SEQ ID NO:12),

wherein

X_2 is Arg, Asn, Gln, Glu, His, Leu, Phe, Pro, Trp, Tyr, or Val;

X_3 is Arg, Asp, Gln, Gly, Ile, Lys, Phe, Thr, Trp or Tyr;

X_4 is Ala, Arg, Asp, Glu, Gly, Leu, Ser, or Tyr;

X_5 is Asp, Gln, Glu, Leu, Met, Phe, Pro, Ser, or Tyr;

X_6 is Asp, Leu, Pro, Thr, or Val;

X_7 is Arg, Gln, His, Ile, Leu, Lys, Met, Phe, Thr, Trp or Tyr;

X_8 is Ala, Arg, Asn, Gln, Glu, His, Leu, Lys, Met, or Thr;

X_9 is Ala, Asn, Gln, Gly, Leu, Lys, Phe, Pro, Thr, Trp, or Tyr;

X_{10} is Ala, Arg, Gln, His, Lys, Met, Phe, Pro, Thr, Trp, or Tyr; and

X_{11} is Arg, Gln, Glu, Gly, His, Leu, Met, Phe, Pro, Ser, Thr, Tyr, or Val; or

(M) Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-Cys (SEQ ID NO:10),

wherein

X_2 is Asn, Asp, Pro, Ser, or Thr;

X_3 is Arg, Asp, Ile, Leu, Met, Pro, or Val;

X_4 is Ala, Ile, Leu, Pro, Thr, or Val;

X_5 is Asn, His, Ile, Leu, Lys, Phe, or Thr;

X_6 is Asn, Glu, Gly, His, Leu, Lys, Met, Pro, or Thr;

X_7 is Arg, Asn, Asp, Gln, Glu, Gly, Ile, Lys, Met, Pro, Ser, or Trp; and

X_8 is Gly, Lys, Phe, Ser, Trp, or Tyr.

10. (Previously presented) The polypeptide according to claim 9, wherein

(a) said polypeptide comprises an amino acid sequence of the formula: Cys-X_5-Phe-X_7-Trp-Glu-Cys (residues 4-10 of SEQ ID NO:1), and the following amino acid positions are independently selected as follows: X_2 is Tyr; X_4 is Pro; or combinations of such selections; or

(b) said polypeptide comprises an amino acid sequence of the following formula: Cys-X_2-X_3-X_4-X_5-X_6-X_7-Cys (SEQ ID NO:9), and the following amino acid positions are independently selected as follows: X_2 is Asp or Leu; X_3 is Glu or Leu; X_4 is His or Leu; X_5 is Thr or Pro; X_6 is Lys; or combinations of such selections; or

(c) said polypeptide comprises an amino acid sequence of the following formula: Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-Cys (SEQ ID NO:10), and the following amino acid positions are independently selected as follows: X_2 is Asp; X_3 is Ile; X_4 is Val or Leu; X_5 is Thr; X_6 is Leu; X_8 is Ser; or combinations of such selections; or

(d) said polypeptide comprises an amino acid sequence of the following formula:

Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-Cys (SEQ ID NO:11), and the following amino acid positions are independently selected as follows: X_4 is Asp; X_5 is Glu or Pro; X_6 is Leu; X_7 is Thr; or combinations of such selections; or

(e) said polypeptide comprises an amino acid sequence of the following formula: Cys-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys (SEQ ID NO:12), and the following amino acid positions are independently selected as follows: X_2 is Trp, Tyr, or Val; X_3 is Asp; X_4 is Asp; X_5 is Leu; X_6 is Leu or Thr; X_7 is Lys or Thr; X_8 is Arg or Leu; X_9 is Thr or Trp; X_{10} is Met or Phe; X_{11} is Val; or combinations of such selections.

11. (Currently amended) A BLyS binding polypeptide comprising an amino acid sequence of the following formula:

(A) X_1-X_2-X_3-Cys-X_5-Phe-X_7-Trp-Glu-Cys-X_{11}-X_{12}-X_{13} (SEQ ID NO:1),

wherein

X_1 is Ala, Asn, Lys, or Ser;

X_2 is Ala, Glu, Met, Ser, or Val;

X_3 is Ala, Asn, Lys, or Pro;

X_5 is Phe, Trp, or Tyr;

X_7 is Pro or Tyr;

X_{11} is Ala, Gln, His, Phe, or Val;

X_{12} is Asn, Gln, Gly, His, Ser, or Val; and

X_{13} is Ala, Asn, Gly, Ile, Pro, or Ser; or

(B) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-Cys-X_{12}-X_{13}-X_{14} (SEQ ID NO:2), wherein

X_1 is Ala, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val, or is absent;

X_2 is Ala, Asn, Asp, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val;

X_3 is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val;

X_5 is Asp, Ile, Leu, or Tyr; X_6 is Arg, Asp, Glu, His, Ile, Leu, Lys, Phe, Pro, Tyr, or Val;

X_7 is His, Leu, Lys, or Phe; X_8 is Leu, Pro, or Thr;

X_9 is Arg, Asn, Gly, His, Ile, Lys, Met, or Trp;

X_{10} is Ala, Gln, Glu, Gly, His, Ile, Leu, Met, Phe, Ser, Trp, Tyr, or Val;

X_{12} is Asp, Gln, Glu, Gly, Ile, Leu, Lys, Phe, Ser, Trp, Tyr, or Val;

X_{13} is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val; and

X_{14} is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Phe, Pro, Trp, Tyr, Val, or is absent; or

(C) ~~X_1-X_2-X_3-Cys$_5$-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys-X_{13}-X_{14}-X_{15}~~ X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys-X_{13}-X_{14}-X_{15} (SEQ ID NO:3),

wherein

X_1 is Ala, Arg, Asn, Asp, Leu, Lys, Phe, Pro, Ser, or Thr;

X_2 is Asn, Asp, Gln, His, Ile, Lys, Pro, Thr, or Trp;

X_3 is Ala, Arg, Asn, Gln, Glu, His, Phe, Pro, or Thr;

X_5 is Asn, Asp, Pro, Ser, or Thr;

X_6 is Arg, Asp, Ile, Leu, Met, Pro, or Val;

X_7 is Ala, Ile, Leu, Pro, Thr, or Val;

X_8 is Asn, His, Ile, Leu, Lys, Phe, or Thr;

X_9 is Asn, Glu, Gly, His, Leu, Lys, Met, Pro, or Thr;

X_{10} is Arg, Asn, Asp, Gln, Glu, Gly, Ile, Lys, Met, Pro, Ser, or Trp;

X_{11} is Arg, Glu, Gly, Lys, Phe, Ser, Trp, or Tyr;

X_{13} is Gln, Glu, Ile, Leu, Phe, Pro, Ser, Tyr, or Val;

X_{14} is Asn, Gly, Ile, Phe, Pro, Thr, Trp, or Tyr; and

X_{15} is Asn, Asp, Glu, Leu, Lys, Met, Pro, or Thr; or

(D) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-Cys-X_{14}-X_{15}-X_{16} (SEQ ID NO:4),

wherein

X_1 is Asn, Asp, His, Leu, Phe, Pro, Ser, Tyr, or is absent;

X_2 is Arg, Asn, Asp, His, Phe, Ser, or Trp;

X_3 is Asn, Asp, Leu, Pro, Ser, or Val;

X_5 is Asp, Gln, His, Ile, Leu, Lys, Met, Phe, or Thr;

X_6 is His, Ile, Leu, Met, Phe, Pro, Trp, or Tyr;

X_7 is Asp, His, Leu, or Ser;

X_8 is Ala, Arg, Asp, Glu, Leu, Phe, Pro, or Thr;

X_9 is Ala, Arg, Asn, or Leu;

X_{10} is Ile, Leu, Met, Pro, Ser, or Thr;

X_{11} is Ala, Arg, Asn, Gly, His, Lys, Ser, or Tyr;

X_{12} is Ala, Arg, Asn, Gln, Leu, Met, Ser, Trp, Tyr, or Val;

X_{14} is Asp, Gly, Leu, Phe, Tyr, or Val; and

X_{15} is Asn, His, Leu, Pro, or Tyr; and X_{16} is Asn, Asp, His, Phe, Ser, or Tyr; or

(E) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-Cys-X_{16}-X_{17}-X_{18} (SEQ ID NO:5),

wherein

X_1 is Arg, Asp, Gly, His, Leu, Phe, Pro, Ser, Trp, Tyr, or is absent;

X_2 is Ala, Arg, Asn, Asp, Gly, Pro, Ser, or is absent;

X_3 is Arg, Asn, Gln, Glu, Gly, Lys, Met, Pro, Trp or Val;

X_5 is Arg, Asn, Gln, Glu, His, Leu, Phe, Pro, Trp, Tyr, or Val;

X_6 is Arg, Asp, Gln, Gly, Ile, Lys, Phe, Thr, Trp or Tyr;

X_7 is Ala, Arg, Asp, Glu, Gly, Leu, Ser, or Tyr;

X_8 is Asp, Gln, Glu, Leu, Met, Phe, Pro, Ser, or Tyr;

X_9 is Asp, Leu, Pro, Thr, or Val;

X_{10} is Arg, Gln, His, Ile, Leu, Lys, Met, Phe, Thr, Trp or Tyr;

X_{11} is Ala, Arg, Asn, Gln, Glu, His, Leu, Lys, Met, or Thr;

X_{12} is Ala, Asn, Gln, Gly, Leu, Lys, Phe, Pro, Thr, Trp, or Tyr;

X_{13} is Ala, Arg, Gln, His, Lys, Met, Phe, Pro, Thr, Trp, or Tyr;

X_{14} is Arg, Gln, Glu, Gly, His, Leu, Met, Phe, Pro, Ser, Thr, Tyr, or Val;

X_{16} is Arg, Asp, Gly, His, Lys, Met, Phe, Pro, Ser, or Trp;

X_{17} is Arg, Asn, Asp, Gly, His, Phe, Pro, Ser, Trp or Tyr; and

X_{18} is Ala, Arg, Asn, Asp, His, Leu, Phe, or Trp; or

(F) X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12} (SEQ ID NO:6),

wherein

X_1 is Ala, Arg, Gly, His, Leu, Lys, Met, Phe, Trp, Tyr, or Val;

X_2 is Ala, Arg, Gln, His, Ile, Leu, Phe, Thr, Trp, or Tyr;

X_3 is Ala, Asp, Lys, Phe, Thr, Trp or Tyr;

X_4 is Arg, Asp, Gln, Lys, Met, Phe, Pro, Ser, Tyr, or Val;

X_5 is Asp, Leu, Lys, Phe, Pro, Ser, or Val;

X_6 is His, Ile, Leu, Pro, Ser, or Thr;

X_7 is Arg, Gly, His, Leu, Lys, Met, or Thr;

X_8 is Ala, Arg, Asn, Ile, Leu, Lys, Met, or Thr;

X_9 is Ala, Asn, Arg, Asp, Glu, Gly, His, Leu, Met, Ser, Trp, Tyr, or Val;

X_{10} is Ile, Leu, Phe, Ser, Thr, Trp, Tyr, or Val;

X_{11} is Ala, Arg, Gly, His, Ile, Leu, Lys, Pro, Ser, Thr, Trp, Tyr, or Val; and

X_{12} is Arg, Asp, His, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val; or

(G) X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13} (SEQ ID NO:7),

wherein

X_1 is Asp, Gln, Glu, Gly, His, Lys, Met, or Trp;

X_2 is Arg, Gln, His, Ile, Leu, or Pro;

X_3 is Asp, Gly, Ile, Lys, Thr, Tyr or Val;

X_4 is Asn, Asp, Gln, Glu, Met, Pro, Ser, or Tyr;

X_5 is Asn, Asp, His, Ile, Leu, Met, Pro, Thr or Val;

X_6 is Asp, Glu, His, Leu, Lys, Pro, or Val;

X_7 is Arg, Asn, Gln, His, Ile, Leu, Met, Pro, or Thr;

X_8 is Gln, Gly, His, Leu, Met, Ser, or Thr;

X_9 is Asn, Gln, Gly, His, Leu, Lys, Ser, or Thr;

X_{10} is Ala, Gly, Ile, Leu, Lys, Met, or Phe;

X_{11} is Ala, Glu, His, Ile, Leu, Met, Ser, Thr, Trp, Tyr, or Val;

X_{12} is Arg, Gln, Glu, Gly, His, Ile, Lys, Tyr, or Val; and

X_{13} is Arg, Asn, Glu, His, Ile, Ser, Thr, Trp, or Val.

12. (Original) The BLyS binding polypeptide according to claim 11, wherein

(a) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-Cys-X_5-Phe-X_7-Trp-Glu-Cys-X_{11}-X_{12}-X_{13} (SEQ ID NO:1), and the following amino acid positions are independently selected as follows: X_3 is Lys; X_5 is Tyr; X_7 is Pro; X_{11} is Ala, Gln, His, Phe, or Val; X_{12} is Asn, Gln, Gly, His, Ser, or Val; X_{13} is Ala, Asn, Gly, Ile, Pro, or Ser; or combinations of such selections; or

(b) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-Cys-X_{12}-X_{13}-X_{14} (SEQ ID NO:2), and the following amino acid positions are independently selected as follows: X_3 is Asp; X_5 is Asp or Leu; X_6 is Glu or Leu; X_7 is His or Leu; X_8 is Thr or Pro; X_9 is Lys; or combinations of such selections; or

(c) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys-X_{13}-X_{14}-X_{15} (SEQ ID NO:3), and the following amino acid positions are independently selected as follows: X_3 is Ala; X_5 is Asp; X_6 is Ile; X_7 is Val or Leu; $X_8$is Thr; X_9 is Leu; X_{11} is Ser; X_{13} is Val; X_{15} is Glu or Pro; or combinations of such selections; or

(d) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-Cys-X_{14}-X_{15}-X_{16} (SEQ ID NO:4), and the following amino acid positions are independently selected as follows: X_1 is Ser; X_2 is Arg; X_3 is Asn or Asp; X_7 is Asp; X_8 is Glu or Pro; X_9 is Leu; X_{10} is Thr; X_{14} is Leu; X_{15} is His, Leu, or Pro; X_{16} is Asp or Ser; or combinations of such selections; or

(e) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-Cys-X_{16}-X_{17}-X_{18} (SEQ ID NO:5), and the following amino acid positions are independently selected as follows: X_1 is Arg; X_2 is Asn, Asp, Gly, or Pro; X_3 is Gly or Met; X_5 is Trp, Tyr, or Val; X_6 is Asp; X_7 is Asp; X_8 is Leu; X_9 is Leu or Thr; X_{10} is Lys or Thr; X_{11} is Arg or Leu; X_{12} is Thr or Trp; X_{13} is Met or Phe; X_{14} is Val; X_{16} is Met; X_{17} is Arg, His, or Tyr; X_{18} is Asn or His; or combinations of such selections; or

(f) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12} (SEQ ID NO:6), and the following amino acid positions are independently selected as follows: X_1 is Gly, Tyr, or Val; X_2 is His or Tyr; X_3 is Asp or Tyr; X_4 is Asp or Gln; X_5 is Leu or Ser; X_6 is Leu or Thr; X_7 is Lys or Thr; X_8 is Leu or Lys; X_9 is Met or Ser; X_{10} is Thr or Leu; X_{11} is Pro or Thr; X_{12} is Arg or Pro; or combinations of such selections; or

(g) said polypeptide includes an amino acid sequence of the following formula: X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13} (SEQ ID NO:7), and the following amino acid positions are independently selected as follows: X_1 is Glu or Lys; X_2 is His or Pro; X_3 is Tyr; X_4 is Asp or Gln; X_5 is Asn or Thr; X_6 is Asp or Pro; X_7 is Ile or Pro; X_8 is Leu or Thr; X_9 is Lys; X_{10} is Gly or Met; X_{11} is Ala or Thr; X_{12} is Arg or His; X_{13} is His; or combinations of such selections.

13. (Withdrawn) The BLyS binding polypeptide according to claim 11, comprising an amino acid sequence selected from the group consisting of SEQ ID NOs:20-162 as depicted in Tables 1-8.

14. (Currently amended) The BLyS binding polypeptide according to claim 11, comprising an amino acid sequence selected from the group consisting of:

AGKEPCYFYWECAVSGPGPEGGGK (SEQ ID NO:163),
~~AGVPFCDLLTKJICFEAGPGPEGGGK~~ AGVPFCDLLTKHCFEAGPGPEGGGK (SEQ ID NO:164), GSSRLCHMDELTHVCVHFAPPGPEGGGK (SEQ ID NO:165), GDGGNCYTDSLTKLHFCMGDEPGPEGGGK (SEQ ID NO:166), GYDVLTKLYFVPGGPGPEGGGK (SEQ ID NO:167), and WTDSLTGLWFPDGGPGPEGGGK[[,]] (SEQ ID NO:168).

15 – 23. (Canceled)

24. (Withdrawn- currently amended) A method for detecting BLyS or a BLyS-like polypeptide in a solution suspected of containing it comprising:

(a) contacting said solution with a polypeptide according to claim ~~any of claims 1,~~ 9 or 11, and (b) determining whether binding has occurred between said polypeptide and BLyS or a BLyS-like polypeptide.

25. (Withdrawn- currently amended) A method for purifying BLyS or a BLyS-like polypeptide comprising:

contacting a solution containing BLyS or a BLyS-like polypeptide to a support that comprises, immobilized thereon, a BLyS polypeptide according to claim 9 or 11 ~~claims 1, 9, or 11~~; and,

separating the solution from said support.

26. (Withdrawn- currently amended) BLyS separation media comprising:

(a) a chromatographic matrix material, and, immobilized thereon,

(b) a BLyS binding molecule comprising a BLyS binding polypeptide as defined in claim 9 or 11 ~~any of claims 1, 9, or 11~~.

27. (Withdrawn) The BLyS separation media according to claim 26, comprising:

(a) a chromatographic matrix material, and, immobilized thereon,

(b) a BLyS binding molecule comprising a BLyS binding polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs:20-162 and 186-435, as depicted in Tables 1-8 and 14.

28. (Withdrawn) A method for separating BLyS or a BLyS-like polypeptide from a solution containing it comprising:

(a) contacting said solution with separation media as defined in claim 26;

(b) removing unbound material; and

(c) eluting bound BLyS or BLyS-like polypeptide from said separation media.

29.- 34. (Canceled)

35. (Withdrawn- currently amended) A polynucleotide encoding a BLyS binding polypeptide of the formula:

(A) X_1-X_2-X_3-Cys-X_5-Phe-X_7-Trp-Glu-Cys-X_{11}-X_{12}-X_{13} (SEQ ID NO:1),

wherein

X_1 is Ala, Asn, Lys, or Ser;

X_2 is Ala, Glu, Met, Ser, or Val;

X_3 is Ala, Asn, Lys, or Pro;

X_5 is Phe, Trp, or Tyr;

X_7 is Pro or Tyr;

X_{11} is Ala, Gln, His, Phe, or Val;

X_{12} is Asn, Gln, Gly, His, Ser, or Val; and

X_{13} is Ala, Asn, Gly, Ile, Pro, or Ser; or

(B) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-Cys-X_{12}-X_{13}-X_{14} (SEQ ID NO:2),

wherein

X_1 is Ala, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, Val, or is absent;

X_2 is Ala, Asn, Asp, Gln, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val;

X_3 is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val;

X_5 is Asp, Ile, Leu, or Tyr;

X_6 is Arg, Asp, Glu, His, Ile, Leu, Lys, Phe, Pro, Tyr, or Val;

X_7 is His, Leu, Lys, or Phe;

X_8 is Leu, Pro, or Thr;

X_9 is Arg, Asn, Gly, His, Ile, Lys, Met, or Trp;

X_{10} is Ala, Gln, Glu, Gly, His, Ile, Leu, Met, Phe, Ser, Trp, Tyr, or Val;

X_{12} is Asp, Gln, Glu, Gly, Ile, Leu, Lys, Phe, Ser, Trp, Tyr, or Val;

X_{13} is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr, or Val; and

X_{14} is Ala, Arg, Asn, Asp, Gln, Glu, Gly, His, Ile, Leu, Lys, Phe, Pro, Trp, Tyr, Val, or is absent; or

(C) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-Cys-X_{13}-X_{14}-X_{15} (SEQ ID NO:3),

wherein

X_1 is Ala, Arg, Asn, Asp, Leu, Lys, Phe, Pro, Ser, or Thr;

X_2 is Asn, Asp, Gln, His, Ile, Lys, Pro, Thr, or Trp;

X_3 is Ala, Arg, Asn, Gln, Glu, His, Phe, Pro, or Thr;

X_5 is Asn, Asp, Pro, Ser, or Thr;

X_6 is Arg, Asp, Ile, Leu, Met, Pro, or Val;

X_7 is Ala, Ile, Leu, Pro, Thr, or Val;

X_8 is Asn, His, Ile, Leu, Lys, Phe, or Thr;

X_9 is Asn, Glu, Gly, His, Leu, Lys, Met, Pro, or Thr;

X_{10} is Arg, Asn, Asp, Gln, Glu, Gly, Ile, Lys, Met, Pro, Ser, or Trp;

X_{11} is Arg, Glu, Gly, Lys, Phe, Ser, Trp, or Tyr;

X_{13} is Gln, Glu, Ile, Leu, Phe, Pro, Ser, Tyr, or Val;

X_{14} is Asn, Gly, Ile, Phe, Pro, Thr, Trp, or Tyr; and

X_{15} is Asn, Asp, Glu, Leu, Lys, Met, Pro, or Thr; or

(D) ~~X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-$X_9$$X_{10}$-$X_{11}$-$X_{12}$-Cys-$X_{14}$-$X_{15}$-$X_{16}$~~ X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-Cys-X_{14}-X_{15}-X_{16} (SEQ ID NO:4),

wherein

X_1 is Asn, Asp, His, Leu, Phe, Pro, Ser, Tyr, or is absent;

X_2 is Arg, Asn, Asp, His, Phe, Ser, or Trp;

X_3 is Asn, Asp, Leu, Pro, Ser, or Val;

X_5 is Asp, Gln, His, Ile, Leu, Lys, Met, Phe, or Thr;

X_6 is His, Ile, Leu, Met, Phe, Pro, Trp, or Tyr;

X_7 is Asp, His, Leu, or Ser;

X_8 is Ala, Arg, Asp, Glu, Leu, Phe, Pro, or Thr;

X_9 is Ala, Arg, Asn, or Leu;

X_{10} is Ile, Leu, Met, Pro, Ser, or Thr;

X_{11} is Ala, Arg, Asn, Gly, His, Lys, Ser, or Tyr;

X_{12} is Ala, Arg, Asn, Gln, Leu, Met, Ser, Trp, Tyr, or Val;

X_{14} is Asp, Gly, Leu, Phe, Tyr, or Val;

X_{15} is Asn, His, Leu, Pro, or Tyr; and

X_{16} is Asn, Asp, His, Phe, Ser, or Tyr; or

(E) X_1-X_2-X_3-Cys-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13}-X_{14}-Cys-X_{16}-X_{17}-X_{18} (SEQ ID NO:5),

wherein

X_1 is Arg, Asp, Gly, His, Leu, Phe, Pro, Ser, Trp, Tyr, or is absent;

X_2 is Ala, Arg, Asn, Asp, Gly, Pro, Ser, or is absent;

X_3 is Arg, Asn, Gln, Glu, Gly, Lys, Met, Pro, Trp, or Val;

X_5 is Arg, Asn, Gln, Glu, His, Leu, Phe, Pro, Trp, Tyr, or Val;

X_6 is Arg, Asp, Gln, Gly, Ile, Lys, Phe, Thr, Trp or Tyr;

X_7 is Ala, Arg, Asp, Glu, Gly, Leu, Ser, or Tyr;

X_8 is Asp, Gln, Glu, Leu, Met, Phe, Pro, Ser, or Tyr;

X_9 is Asp, Leu, Pro, Thr, or Val;

X_{10} is Arg, Gln, His, Ile, Leu, Lys, Met, Phe, Thr, Trp, or Tyr;

X_{11} is Ala, Arg, Asn, Gln, Glu, His, Leu, Lys, Met, or Thr;

X_{12} is Ala, Asn, Gln, Gly, Leu, Lys, Phe, Pro, Thr, Trp, or Tyr;

X_{13} is Ala, Arg, Gln, His, Lys, Met, Phe, Pro, Thr, Trp, or Tyr;

X_{14} is Arg, Gln, Glu, Gly, His, Leu, Met, Phe, Pro, Ser, Thr, Tyr, or Val;

X_{16} is Arg, Asp, Gly, His, Lys, Met, Phe, Pro, Ser, or Trp;

X_{17} is Arg, Asn, Asp, Gly, His, Phe, Pro, Ser, Trp, or Tyr; and

X_{18} is Ala, Arg, Asn, Asp, His, Leu, Phe, or Trp; or

(F) X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12} (SEQ ID NO:6),

wherein

X_1 is Ala, Arg, Gly, His, Leu, Lys, Met, Phe, Trp, Tyr, or Val;

X_2 is Ala, Arg, Gln, His, Ile, Leu, Phe, Thr, Trp, or Tyr;

X_3 is Ala, Asp, Lys, Phe, Thr, Trp, or Tyr;

X_4 is Arg, Asp, Gln, Lys, Met, Phe, Pro, Ser, Tyr, or Val;

X_5 is Asp, Leu, Lys, Phe, Pro, Ser, or Val;

X_6 is His, Ile, Leu, Pro, Ser, or Thr;

X_7 is Arg, Gly, His, Leu, Lys, Met, or Thr;

X_8 is Ala, Arg, Asn, Ile, Leu, Lys, Met, or Thr;

X_9 is Ala, Asn, Arg, Asp, Glu, Gly, His, Leu, Met, Ser, Trp, Tyr, or Val;

X_{10} is Ile, Leu, Phe, Ser, Thr, Trp, Tyr, or Val;

X_{11} is Ala, Arg, Gly, His, Ile, Leu, Lys, Pro, Ser, Thr, Trp, Tyr, or Val; and

X_{12} is Arg, Asp, His, Leu, Lys, Met, Phe, Pro, Ser, Trp, Tyr, or Val; or

(G) X_1-X_2-X_3-X_4-X_5-X_6-X_7-X_8-X_9-X_{10}-X_{11}-X_{12}-X_{13} (SEQ ID NO:7),

wherein

X_1 is Asp, Gln, Glu, Gly, His, Lys, Met, or Trp;

X_2 is Arg, Gln, His, Ile, Leu, or Pro;

X_3 is Asp, Gly, Ile, Lys, Thr, Tyr, or Val;

X_4 is Asn, Asp, Gln, Glu, Met, Pro, Ser, or Tyr;

X_5 is Asn, Asp, His, Ile, Leu, Met, Pro, Thr, or Val;

X_6 is Asp, Glu, His, Leu, Lys, Pro, or Val;

X_7 is Arg, Asn, Gln, His, Ile, Leu, Met, Pro, or Thr;

X_8 is Gln, Gly, His, Leu, Met, Ser, or Thr;

X_9 is Asn, Gln, Gly, His, Leu, Lys, Ser, or Thr;

X_{10} is Ala, Gly, Ile, Leu, Lys, Met, or Phe;

X_{11} is Ala, Glu, His, Ile, Leu, Met, Ser, Thr, Trp, Tyr, or Val;

X_{12} is Arg, Gln, Glu, Gly, His, Ile, Lys, Tyr, or Val; and

X_{13} is Arg, Asn, Glu, His, Ile, Ser, Thr, Trp, or Val.

36 - 38. (Canceled)

39. (Previously presented) The polypeptide according to claim 9, wherein the polypeptide comprises an amino acid sequence according to formula H.

40. (Previously presented) The polypeptide according to claim 39, wherein the polypeptide comprises

X_1-X_2-X_3-Cys-X_5-Phe-X_7-Trp-Glu-Cys-X_{11}-X_{12}-X_{13} (SEQ ID NO:1),

wherein

X_1 is Ala, Asn, Lys, or Ser;

X_2 is Ala, Glu, Met, Ser, or Val;

X_3 is Ala, Asn, Lys, or Pro;

X_{11} is Ala, Gln, His, Phe, or Val;

X_{12} is Asn, Gln, Gly, His, Ser, or Val; and

X_{13} is Ala, Asn, Gly, Ile, Pro, or Ser.

41. (Withdrawn- currently amended) The polypeptide according to claim 40, wherein $\underline{X_1}$ [[X_3]] is Lys.

42. (Previously presented) The polypeptide according to claim 39, wherein X_5 is Tyr.

43. (Previously presented) The polypeptide according to claim 39, wherein X_7 is Tyr.

44. (Previously presented) The polypeptide according to claim 39, wherein X_5 is Tyr; and X_7 is Tyr.

45. (Previously presented) The polypeptide according to claim 39, that comprises SEQ ID NO:22, 23, 24, 25, or 26.

46. (Previously presented) The polypeptide according to claim 39, that comprises SEQ ID NO:27.

47. (Previously presented) The BLyS binding polypeptide according to claim 39, wherein the polypeptide comprises the sequence AGKEPCYFYWECAVSGPGPEGGGK (SEQ ID NO:163).

48. (Previously presented) The BLyS binding polypeptide of claim 9, wherein the polypeptide binds BLyS with an affinity less than 3 μM.

49. (Previously presented) The BLyS binding polypeptide of claim 39, wherein the polypeptide binds BLyS with an affinity less than 3 μM.

50. (Withdrawn) The BLyS binding polypeptide of claim 40, wherein the polypeptide binds BLyS with an affinity less than 3μM.

51. (Previously presented) The BLyS binding polypeptide of claim 9, wherein the polypeptide binds BLyS at least 12-fold better than the polypeptide binds strepavidin.

52. (Previously presented) The BLyS binding polypeptide of claim 39, wherein the polypeptide binds BLyS at least 12-fold better than the polypeptide binds strepavidin.

53. (Withdrawn) The BLyS binding polypeptide of claim 9, that comprises an amino acid sequence according to formula I.

54. (Withdrawn) The BLyS binding polypeptide of claim 53, that comprises SEQ ID NO:28.

55. (Withdrawn-currently amended) A method for purifying BLyS or a BLyS-like polypeptide, the method comprising:

contacting a solution containing BLyS or a BLyS-like polypeptide to a support that comprises, immobilized thereon, a BlyS binding polypeptide according to claim 39, 40, 41, 42, 43, 44, 45, 46 or 47; and,

separating the solution from the support.

56. (Withdrawn-currently amended) A nucleic acid comprising a sequence encoding the polypeptide of claim 9, 39, 40, 41, 42, 43, 44, 45, 46, or 47.

57. (New) The polypeptide according to claim 9, wherein the polypeptide comprises an amino acid sequence according to formula J.

58. (New) The polypeptide according to claim 9, wherein the polypeptide comprises an amino acid sequence according to formula K.

59. (New) The polypeptide according to claim 9, wherein the polypeptide comprises an amino acid sequence according to formula L.

60. (New) The polypeptide according to claim 9, wherein the polypeptide comprises an amino acid sequence according to formula M.